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(54) Title: **PROCESS FOR THE PREPARATION OF CRYSTALLINE NANO-PARTICLE DISPERSIONS**

(57) Abstract: A process for the preparation of a dispersion of crystalline nano-particles in an aqueous medium comprising combining (i) a first solution comprising a substantially water-insoluble substance in a water-miscible organic solvent with; (ii) an aqueous phase comprising water and optionally a stabiliser, to form a dispersion of amorphous particles; and (iii) sonicating the dispersion of amorphous particles for a sufficient period to form crystalline nano-particles of the substantially water-insoluble substance. The process provides nano-crystals with a mean hydrodynamic diameter of less than 1 micron, particularly less than 300 nm and is particularly useful for the preparation of nano-crystalline dispersions of pharmaceutical substances.

# INTERNATIONAL SEARCH REPORT

Int. Application No.  
P. IB 03/03044

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61K9/10 A61K9/14 A61K9/51

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P	US 2003/059472 A1 (DOTY MARK ET AL) 27 March 2003 (2003-03-27) claims 1-6, 18, 25-33, 43-47, 51-62; figure 1	1-14, 16, 17
X	WO 99 00113 A (MAGDASSI SHLOMO ; SAHADEVAN DAVID C (US); SOON SHIONG PATRICK (US);) 7 January 1999 (1999-01-07) page 9, paragraph 2; claims 53, 61, 62; example 19 page 21, paragraph 2 - page 22, line 21 page 35	1-6, 11, 12, 14, 17
X	WO 98 14174 A (SOON SHIONG PATRICK ; TAO CHUNLIN (US); YANG ANDREW (US); DESAI NEI) 9 April 1998 (1998-04-09) page 10, paragraph 3; claims 1, 12, 21-27, 36; example 2 page 18, paragraph 2	1-5, 11, 14, 16, 17

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☒ Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	<p>SJOESTROEM B ET AL: "THE FORMATION OF SUBMICRON ORGANIC PARTICLES BY PRECIPITATION IN AN EMULSION"</p> <p>JOURNAL OF DISPERSION SCIENCE AND TECHNOLOGY, NEW YORK, NY, US, vol. 15, no. 1, 1994, pages 89-117, XP009002392</p> <p>ISSN: 0193-2691</p> <p>Abstract</p> <p>page 95; table 1</p>	1-7,10, 12,14, 16,17
X	<p>SJOSTROM B ET AL: "A METHOD FOR THE PREPARATION OF SUBMICRON PARTICLES OF SPARINGLY WATER-SOLUBLE DRUGS BY PRECIPITATION IN OIL-IN-WATER EMULSIONS. II: INFLUENCE OF THE EMULSIFIER, THE SOLVENT, AND THE DRUG SUBSTANCE"</p> <p>JOURNAL OF PHARMACEUTICAL SCIENCES, AMERICAN PHARMACEUTICAL ASSOCIATION, WASHINGTON, US, vol. 82, no. 6, 1 June 1993 (1993-06-01), pages 584-589, XP000367863</p> <p>ISSN: 0022-3549</p> <p>Abstract</p>	1-8, 10-12, 14,16,17

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